

PORSF
11.3.31.5.1

Page 1 of 1

Childs, John

From: Betsy Striplin [bstriplin@striplin.com]
Sent: Monday, December 11, 2000 1:58 PM
To: John Childs
Cc: Gene Revelas
Subject: T-6 Scope Memo

John -

Our scope of work for the water quality monitoring during T-6 dredging is found in the attached memo. Additional conversations with you and perhaps Pad or Sebastian relative to the end uses of these data may result in a tweak this scope. I'll be in Portland Tuesday, Wednesday and Friday of this week and could meet with you on one of those days (late Tuesday, Wednesday afternoon, or late Friday). Given that time is short, I'd like to get this scope finalized quickly. If you can't reach me, give Gene Revelas a call at our Olympia office (360-705-3534) with your thoughts. He can modify the scope/costs accordingly.

Betsy

Betsy Striplin
Striplin Environmental Associates
15111 8th Avenue SW, Suite 303
Seattle, WA 98166
(206) 241-5185
(206) 241-5159 FAX
bstriplin@striplin.com

USEPA SF



1286321

12/22/00



15111 8th Avenue SW, Suite 303
Seattle, WA 98166
(206) 241-5185
FAX (206) 241-5159

MEMORANDUM

TO: John Childs

FROM: Betsy Striplin

DATE: December 11, 2000

SUBJECT: Work Order for Water Quality Monitoring During T-6 Dredging

This memorandum briefly describes a scope of work to prepare a field sampling plan and conduct water quality sampling in the vicinity of upcoming dredging operations at Terminal 6. Project schedule and a rough budget are also included for each task. Note that the actual budget for sampling and associated analyses cannot be determined until after the field sampling plan has been completed and the numbers of samples and analyses determined. It would be very helpful to get additional direction from the Port as to the overall objective of this monitoring effort to help establish the most appropriate sampling program.

Task 1. Literature Review.

This task is presented and costed as two approaches that reflect different levels of effort for a literature review.

Alternative 1a. Abbreviated Literature Review

The objective of an abbreviated literature review will be to collect and summarize information that will be useful for the development of a T-6 maintenance dredging water quality sampling plan. This literature review will incorporate previously-summarized information on water quality impacts associated with dredging. Literature sources might include environmental impact statements, summary documents (if available), and approaches and results from a few actual monitoring events including recent dredging in the Duwamish River's East Waterway. Results of the literature review will be included in the Field Sampling Plan (Task 2).

This level of literature review could be completed in less than two weeks at a cost of approximately \$5,000.

Alternative 1b. Thorough Literature Review

The objective of a thorough literature review of the water quality impacts of dredging will be to develop a well-referenced overview using both historical and recent information that focuses on the potential impacts of chemical contaminants released during dredging. A large amount of information was generated by the U.S. Army Corps of Engineers Waterways Experiment Station in the 1970s and 1980s. Most of this information pertains to measures of total suspended solids, dissolved oxygen, and similar conventional parameters. In contrast, the water quality monitoring for many recent contaminated sediment dredging projects has included both conventional parameters and concentrations of chemicals of concern. The literature review will evaluate both historical and recent information to identify possible chemical-related impacts and the steps that can be taken to minimize these risks.

A thorough review of the literature is anticipated to require approximately 2 months. This review will be provided to the Port of Portland as a stand-alone document. It is anticipated that this review could be completed for approximately \$25,000.

Task 2. Development of a Field Sampling Plan

A field sampling plan will be developed that includes the following information: review of sediment conditions within the dredge prism; locations of sampling stations; identification of conventional and chemical analytes of concern; monitoring frequency; analytical methods; quality assurance/quality control (QA/QC) procedures; data management; and reporting.

The field sampling plan will require approximately two weeks to complete at a cost of approximately \$5,000.

Task 3. Water Quality Monitoring

Water quality will be monitored during dredging in compliance with the Field Sampling Plan prepared under Task 2. At present we assume 5 days of Hydrolab monitoring (conventional measurements and plume tracking) at three stations and laboratory analyses (DDT, conventional parameters) for 30 water samples. Based on these assumptions, the field program, including laboratory analyses, should be able to be performed for less than \$30,000.

Task 4. Reporting

A brief letter report will be prepared containing sampling and laboratory activities (including QA/QC results) and monitoring results. The report will be provided to the Port of Portland in hardcopy and electronic formats.

The letter report will be available two weeks following receipt of the data from the laboratory. Reporting costs are anticipated to be \$6,000.

Task 5. Agency/Public Review

At the request of the Port, Striplin will participate in agency briefings before and after dredging. A pre-dredge briefing is anticipated at which the Port will present their plan for water quality

monitoring. A second briefing is anticipated following receipt of the final report during which the Port will present the results of the monitoring program.

The first meeting is anticipated to occur during late December 2000 or the first week of January 2001 and the second meeting is anticipated to occur in February 2001. We have allocated \$3,000 for this task.

Cost Summary

Anticipated costs are summarized below.

Task 1. Literature Review	
A. Abbreviated Review	\$5,000
B. Thorough Review	\$25,000
Task 2. Field Sampling Plan	\$5,000
Task 3. Sampling and Analysis	\$30,000
Task 4. Reporting	\$6,000
Task 5. Public/Agency Review	\$3,000

Total including abbreviated literature review: \$49,000

Total including thorough literature review: \$69,000